

24th October 1966.

Dr Sewell Champe,
Purdue University,
Department of Biological Sciences,
Lafayette,
Indiana 47907,
U.S.A.

Dear Sewell,

We were very pleased to get your letter. Component 30 looks very convincing indeed and we are all eagerly waiting to hear that you have found the B protein tips.

We have looked up the mapping data on FC 58 and we agree with you that there is something fishy about it. Leslie crossed FC 58 with a special derivative of 1589. This is X25 + 1589. X25 is an ochre in the A cistron close to the beginning of 1589. This knocks out the A cistron and thus should make the mapping easier. The cross with FC 58 showed a small number of recombinants although this was not done quantitatively. What is embarrassing however is that FC 201 gives a clear positive result on spot cross with X25 + 1589. In addition FC 201 lies under 1231. This and all the other data for the mutants in that region suggest that FC 201 is to the left of FC 58, in which case FC 58 should give a strong positive result with X25 + 1589. At the moment we are unable to explain this anomaly.

If things had turned out as we expected we should have been able to send you a copy of the completed paper. It has all been completely typed and all the figures and references etc. finished. The only remaining thing that had to be done was to check an entry in one of the tables. This was to make sure that X655 did not revert to ochre. When Leslie checked this we were astonished and delighted to find that it did. This made us suspect that our previous attempts to revert some of the barriers in this way might have been inadequate. She has just found that barriers b5 and b6 also revert to ochres. This makes it extremely likely that our third class of nonsense triplet, which previously we had been unable to identify, is UGA. We are now exploring this intensively and have decided to hold up

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the paper until it is all sorted out as we shall have to rewrite one or two sections which deal with the nature of the barriers this way. However, I have asked Leslie to send you a copy of the map and we will let you have the complete paper in its revised form in a few weeks time.

I have also asked her to send you the following mutants:-

X25 + 1589
X655
FC (1 + 222)

FC 222 is the plus mutant at the extreme right of our region. It gives a minute when combined with FC 1.

If there is any other information you want to know in relation to mutants that you would like us to send you please do not hesitate to ask. As you can imagine Leslie is very occupied just at the moment so I doubt if she will look into the mapping anomaly of FC 58. Do let us know anything that you find about it.

F.H.C. Crick.